

St. Croix Rockhounds  
Doug Olson, Editor  
211 Interlachen Way  
Stillwater, MN 55082



## **First Class**

# February, 2007

Please send exchange bulletins to:

Doug Olson, Editor  
211 Interlachen Way  
Stillwater, MN 55082

## February 20<sup>th</sup> – *“Find of the Year”*



St. Croix Rockhound's

# LEAVERITE NEWS

Vol. 32, Issue 2; February, 2007

Member of:



&



# ST.CROIX ROCKHOUNDS

**MEETINGS:** Club meetings are held the third TUESDAY of each month, at Stonebridge Elementary School on W. Elm. St. in Stillwater, MN at 7:15 P.M.. Everyone is welcome.

**MEMBERSHIP:** Full membership for a single person over 16 is \$7.50 per year. Family membership is \$10.50 per year.

## OFFICERS:

President	Brad Bonse	(651) 439-6832
Vice President	Vic Martinsen	(715) 247-3700
Secretary	Doug Olson	(651) 430-9035
Treasurer	Lin Rawlings	(651) 735-4691
Program Committee	Mark Rasmussen	(651) 275-0607
	Bill Cordua	(715) 425-9544
	Victor Martinson	(715) 247-3700
Show Committee	Bill Cordua	(715) 425-9544
Refreshments	Freya Kask	(651) 777-6371
Librarian	June Young	(651) 429-3887
Historian	John Parsons	(651) 257-2724
Sunshine Committee	Marie Newlander MN	(651) 439-7809
Tour Director	Susan Dustin	(651) 430-3933
Liaison Officer	Freya Kask	(651) 777-6371
Newsletter Editor	Doug Olson	(651) 430-9035

The purpose of our organization is to bring together rock and mineral enthusiasts on a regular basis through membership and through pooling of individual knowledge, talents and skills, to improve the lapidary skills of participating members. Affiliation: American Federation of Mineralogical Societies and Midwest Federation of Mineralogical and Geological Societies.

**COMING UP!** -February 20<sup>th</sup> : St. Croix Rockhounds club meeting will be at Stonebridge Elementary School. Meeting time will be 7:15 pm. The program will be "Find of the Year" See page 7 of this newsletter for categories and rules for "Find of the Year".

## COMING ATTRACTIONS

**February 10-11<sup>th</sup>:** Kettle Moraine Geological Society Annual Show, Wisconsin National Guard Armory, W239 N5678 Maple Ave., Sussez, Wisconsin. Contact: Liz Fuher, (262) 246-6684.

**February 20<sup>th</sup>:** St. Croix Rockhounds club meeting will be at the Stonebridge Elementary School

**February 24-25<sup>th</sup>:** Anoka County Gem & Mineral Club at the Har Mar Mall, Rosedale, MN.

**March :** St Croix Rockhounds Annual Show at mall in Woodbury.

**March 30-1** Mid-America Paleontology Society, National Fossil Exposition XXIX, Western Hall, Western Illinois University, Macomb, IL;. Contact: David J. Kaplan, 313-961-1606, email: aa1609@wayne.edu, Web site: [http:// midamericapaleo.tripod.com](http://midamericapaleo.tripod.com).

**April 14-15<sup>th</sup>:** Anoka County Gem & Mineral Club at the Har Mar Mall, Rosedale, MN.

**May 19-20<sup>th</sup>:** WI Geological Society 50<sup>th</sup> Annual show at Hart Park in Wauwatosa, WI.

**June 5-10<sup>th</sup>:** AFMS/RMFS in Roswell, NM

**July 7-8<sup>th</sup>:** Anoka County Gem & Mineral Club at the Har Mar Mall, Rosedale, MN.

**June 15-17<sup>th</sup>:** California Federation show in Lancaster, CA.

**August 3-5<sup>th</sup>:** Northwest Federation convention in Butte, MT

**August 11-12<sup>th</sup>:** MWF convention in Houghton, MI (during Copper Country week 4-12<sup>th</sup>)

**October 6-7<sup>th</sup>:** Eastern Federation convention in Newark, NY

**June 20-22, 2008:** MWF convention in Lincoln, NE.

# Minutes of the St Croix Rockhounds

## January 16<sup>th</sup>, 2007

**The meeting** was called to order by vice-president, Vic Martinsen, after we had enjoyed our evening's program, a highly interesting presentation by **Scott Wolters on the Kensington Rune stone**. Twenty-five members were present.

**Treasurer's Report**-Lin Rawlings reported that we now have a total of \$1575.00 in our treasury. He will be paying \$5.50 per member soon for insurance soon. Thirty members have paid dues to date. The treasurer's report was approved.

**Minutes** of the December meeting were approved. Next club meeting will be on February 20 at 7:15 at Stonebridge Elementary School. The program will be "Find of the Year".

**Jerry McDougal** is preparing an interest and contact "directory" for all members. Please complete the information form as soon as possible and either mail it to him, e-mail the information, or give to Jerry at the February meeting.

**Refreshments**-June Young and June Shalander provided delicious snacks for the meeting. Next month Pete Rodewald and Marie Newlander will bring refreshments.

**Sunshine**-no news.

**Tour Director**-Susan Dustin discussed a possible tour to the Zumbro River in April to look for coldwater agates. Dates will be voted on at the next meeting.

**Librarian**-no report.

**Show Committee**- Bill Cordua announced that our annual Rock and Mineral Show at the Valley Creek Mall will be on March 31. Sign up sheets for displays will be available at the February and March meetings. He also asked for volunteers to set up the show since he won't be able to participate in the actual show.

**New Business**-Pete Rodewald announced that a special agate show called "The Wonderful World of Agates" sponsored by the Weis Earth Science Museum in Menasha, Wisconsin, will be held on July 10-13, 2008. Agates from around the world, particularly Germany, will be displayed along with photography, an auction, vendors, technical sessions, and adventure programs. Put the dates down on your calendars NOW, and this may be a club trip if there is interest.

Respectfully Submitted,

**Susan Dustin**, Acting Secretary for Doug Olson

For those who participated in the Upper Peninsula Michigan club rockhound trip last year, we received a card from John Perona (who opened up his shop for us) thanking us for visiting. He expressed hopes of seeing us again next year.

**Sunshine Report**



NO NEWS -if you have news - good or bad please call Marie at (651) 439-7809.

*If paying dues by mail, send to treasurer:*

**Lin Rawlings**  
850 Woodduck Rd  
Woodbury, MN 55125



**Field Trips:** The Saint Croix Rockhounds next "official" field trip will be to explore the gravel bars along the Zumbro River to find Minnesota Cold-Water Agates. We'll search between the towns of Zumbrota and Mazeppa, a driving distance of about 50 miles from St. Paul. Cold-Water Agates were formed in a much different environment than Lake Superior Agates, and some have a "bubbly" appearance while others are flat and swirled. There are also jasper specimens with red, purple, and golden colors. This trip will give us a chance to enjoy the river and find a different type of agate that originated in what was once the bottom of an inland sea millions of years ago. Susan won't be at the meeting (I'll be doing grandma activities in Malaysia with my 14 month old grandson, Amir and his parents) but will ask that you look at your calendars and choose a date of either April 28 or May 5.

Susan A. Dustin (susan.dustin@ethicofcitizenship.com)

---

## Celebrate!

February Birthstone : Amethyst

The ancient Greeks believed that this gemstone held many powers, among them protection against intoxication. In fact, the word Amethyst comes from the Greek word "amethystos," meaning sober. In ancient Greece, the gemstone was associated with the god of wine, and it was common practice to serve this beverage from Amethyst goblets in the belief that this would prevent overindulgence. Even today, Amethyst is considered a stabilizing force for those struggling to overcome addictive behaviors.

Once considered more valuable than diamonds, Amethyst is a member of the quartz family, occurring naturally as crystals within rocks.

**February birthdays:** None admitted

**February Anniversaries:** None admitted

(note: I will be pestering people for their birth dates at the next meeting – I won't ask for the year!!)

## A Recent Book – “The Other Lake Superior Agates”, by John D. Marshall

I am not an agate collector, but do appreciate the color and beauty of agates. At the recent show of the Minnesota Mineral Club, Mike Carlson highly recommended a new book entitled “The Other Lake Superior Agates” by John D. Marshall that was just published this year. I have long admired and enjoyed Mike's book, “The Beauty of Banded Agates”, and respect his knowledge of agates. Mike had a few copies of Marshall's book for sale at the show, and on his recommendation I bought a copy.

It is a stunning book, filled with photos of many different kinds of Lake Superior Agates, emphasizing such non-banded agates such as Sagenite, Moss, Tube, Eye, Ruin, Water Level and other unusual Lakers. Detailed discussions about each kind agate and its possible formation are organized by type of agate. Before reading this book I had not appreciated how many different non-banded Lake Superior Agates there were and how interesting they could be. This 173-page book is filled with photos of the various kinds of agate, including many photos taken under magnification to show unusual detail.

If you are interested in finding out more about this book – it is available on Mike Carlson's web site –

[www.agatenodule.com](http://www.agatenodule.com). He quotes a price of \$39.95 for the soft-cover edition.

(editors Note: Thanks to Allen Lundgren, Anoka County Gem & Mineral Club member) – *from Hidden Treasures 01/07*

---

## A Note About Coming AFMS Convention: (June 7-10, 2007)

As president of the Chaparral Rockhounds, I wish to extend an invitation to every rockhound in these grand United States to come us for the AFMS Convention and our “Gems of Enchantment” 2007 Gem and Mineral Show!!! It is going to be a 4-day fun-filled extravaganza with a great 3-day field trip scheduled after the show. Among the many “special” events planned, will be the celebration of the AFMS 60<sup>th</sup> anniversary. For complete information, including motel and exhibitor forms, go to the site [www.amfed.org/show2007.htm](http://www.amfed.org/show2007.htm). We can't promise to keep Genies and Aliens roped in, but we'll try! – *from Diane Weir, President, Chaparral Rockhounds, Roswell, NM via the Trilobite 02/07*

# How Amethyst Cathedrals Form

One of my fondest memories of the Tucson Gem and Mineral Show is coming upon a parking lot full of enormous amethyst geodes ("cathedrals") 6 feet or more high, resting partly in the sawdust of their packing crates. The bulbous to tubular geodes were big enough for an adult to sit in, and lined with deep purple gemmy amethyst, sparking in the Arizona sunlight. All for sale! How do such wonders form?

These excellent geodes come from a region along the Brazil-Uruguay border. The genesis of deposits on the Brazil side of the border has recently been extensively researched by an international team of geochemists lead by H. Albert Gilg of Technische University Munchen in Germany (Gilg, et. al., 2003). The geodes are mined from several lava flows belonging to the Parana Continental Flood Basalt Province. This was one of the largest outpourings of basalt lava known. An estimated 800,000 cubic kilometers of lava extruded over an 11 million year time span. For comparison, this would be enough to cover Minnesota with a pile of basalt lava over 2 miles high. The lava outburst occurred as part of the opening of the South Atlantic Ocean during Cretaceous time about 130 million years

ago. Of all these flows, however, only a few are known to host amethyst cathedral geodes.

Gilg et. al. proposed a 2-stage model for their formation. In the first stage the large hollows form. This was caused as volcanic gases were released from certain lavas as they cooled. Not every lava has enough dissolved gas to form such big openings. As gas bubbles emerged from the congealing lava (much as bubbles emerge when beer or soda pop is poured) they coalesced as they rose. The lava was cooling fast too, and soon became so thick and sticky that bubbles quite rising and were trapped. The bulbous to tubular shapes thus point towards the top of the flow, a fact easily seen when the geodes are in place in the mines. These cavities, though, were empty of crystals.

The second stage was the formation of the amethyst, plus celadonite, calcite and gypsum fillings. An important clue to this event is the presence of small gas and liquid bubbles (called fluid inclusions) trapped within these minerals. These are samples of the mineral-forming liquids caught as the crystals grew. Fluid inclusions are treasure troves of information when studied with sophisticated instruments. Analyses of the fluid inclusions in the amethyst, calcite and gypsum show them to be filled with slightly salty water. This water had a temperature of no more than 100 degrees C, and possible less than 50 degrees C, during mineral formation. These cannot be fluids related to the magma that formed the lavas.

What was the source of these fluids? An amazing story unfolds from the radiometric dating of the minerals. The basalts formed about 130 million years ago, but the green celadonite, which makes up the rinds of the geodes, formed about 70 million years ago. For 60 million years these enormous cavities sat empty of crystals. Trace element data from the fluid inclusions gives another important clue to the source of the mineral-forming fluid. Below the lavas is a large aquifer (the Botucatu aquifer) filled with ground water that closely resembles the fluid inclusion liquids. Uplift and tilting of the area about 70 million years ago would force water out of the aquifer into the porous areas of the overlying lava. In the lava flow these waters would have found volcanic glass. Glass breaks down over geologic time and makes silica and other chemicals available in a form that is readily soluble in water soaking through the rocks. The water carried these chemicals into the cavities, where the amethyst and other minerals grew due to cooling and pressure release. The special combination of geologic circumstances, unfolding over millions of years, is not often duplicated. Understanding the process gives geologist tools to prospect more efficiently for these wonders.

-Dr. Bill Cordua, U. Wisconsin- River Falls

## Reference:

Gilg, H. et. al, 2003, "Genesis of amethyst geodes in basaltic rocks of the Serra Geral Formation (Ametista do Sul, Rio Grande do Sul, Brazil): a fluid inclusion, REE, oxygen, carbon, and Sr isotope study on basalt, quartz and calcite" *Mineralium Deposita* vol. 38, p. 1009-1025.

# **Safety - Tips On Staying Safe... For Women** By Chuck McKie CFMS Safety Chairman 2007 from CFMS Newsletter 01/07

The elbow is the strongest point on your body. If you are close enough to use it, do! If you are ever thrown into the trunk of a car, kick out the back taillights and stick your arm out the hole and start waving like crazy. The driver won't see you but everybody else will. This has saved lives.

A friend went to a personal safety workshop, given by Pat Malone, who has been a bodyguard for famous figures like Farah Fawcett and Sylvester Stallone. He works for the FBI and teaches police officers and Navy SEALs hand-to-hand combat.

This man has seen it all, and knows a lot. He focused his teachings on HOW TO AVOID BEING THE VICTIM OF A VIOLENT CRIME. He gave some statistics about how much the occurrences of random violence have escalated over the recent years, and it's terrible. Something like 99% of us (?) will be exposed to, or become a victim of, a violent crime.

Here are some of the most important points:

- 1 The three reasons women are easy targets for random acts of violence are:
  - a) Lack of Awareness: You MUST know where you are & what's going on around you.
  - b) Body Language: Keep your head up, swing your arms, stand straight up.
  - c) Wrong Place, Wrong Time: DON'T walk alone in an alley, or drive in a bad neighborhood at night.
- 2 Women have a tendency to get into their cars after shopping, eating, working, etc., and just sit (doing their checkbook, or making a list, etc.) DON'T DO THIS! The predator will be watching you, and this is the perfect opportunity for him to get in the passenger side, put a gun to your head, and tell you where to go. **AS SOON AS YOU GET INTO YOUR CAR, LOCK THE DOORS AND DRIVE AWAY.**
  - a) A few notes about getting into your car in a parking lot, or parking garage: Be aware: look around you, look into your car, at the passenger side floor, and in the back seat.
  - b) If you are parked next to a big van, enter your car from the passenger door -- lock the doors before sliding across the seat! Most serial killers attack their victims by pulling them into their vans while the women are attempting to get into their cars.
  - c) Look at the car parked on the driver's side of your vehicle, and the passenger side. If a male is sitting alone in the seat nearest your car, you may want to walk back into the mall, or work, and get a guard/policeman to walk you back out. **IT IS ALWAYS BETTER TO BE SAFE THAN SORRY.** (And better paranoid than dead.)
- 3 ALWAYS take the elevator instead of the stairs. (Stairwells are horrible places to be alone and the perfect crime spot).
- 4 If the predator has a gun and you are not under his control, ALWAYS RUN!
  - a) The predator will only hit you (a running target) 4 in 100 times. And even then, it most likely WILL NOT be a vital organ. RUN!
- 5 As women, we are always trying to be sympathetic: STOP IT! It may get you raped, or killed.
  - a) Ted Bundy, the serial killer, was a good looking, well educated man, who played on the sympathies of unsuspecting women. He walked with a cane, or a limp, and often asked "for help" into his vehicle, or with his vehicle, which is when he abducted his next victim.
  - b) Pat Malone told the story of his daughter, who came out of the mall and was walking to her car when she noticed 2 older ladies in front of her. Then she saw a police car come towards her with cops who said hello. She also noticed that all 8 handicap spots in the area were empty. As she neared her car she saw a man a few rows over calling to her for help. He wanted her to close his passenger side door. He was sitting in the back on the driver's side, and said he was handicapped. He continued calling, until she turned and headed back to the mall, and then he began cursing at her. In the meantime, she wondered why he didn't ask the 2 older ladies, or the policeman for help, and why he was not parked in any of the empty handicap spots. As she got back to the mall, two male friends of hers were exiting, and as she told them the story, and turned to point at the car, the man was getting out of the back seat into the front and the car sped away. **DON'T GET CAUGHT IN THIS TRAP! ALWAYS BE AWARE OF WHAT IS GOING ON AROUND YOU!**

Tell your friends about this. It may save a life. A candle is not dimmed by lighting another candle.

**PLEASE BE SAFE AND NOT SORRY! JUST A WARNING TO ALWAYS BE ALERT AND USE YOUR HEAD!!!**

Pass this along to every woman you have access to.

Never let your guard down!!!!!!!!!!!!

---

Include Your Children When Baking Cookies  
Panda Mating Fails; Veterinarian Takes Over  
Governor Chiles Offers Rare Opportunity to Goose Hunters

Prostitutes Appeal to Pope  
Kids Make Nutritious Snacks

— Headlines via the Fractured Agate 01/07

# FIND OF THE YEAR

## Contest Rules (revised 1991)

The contest is open to all members of the St. Croix Rockhounds club. Absentee members may submit specimens through another member and junior members are eligible to enter the contest and to vote. However, there can be only one entry per person per class. There are five entry classes:

**Lake Superior Agates:** No lapidary work of any kind is allowed. Agates may be oiled.



**Fossils:** Specimens may be cut or glued together. Specimens may be treated or sprayed only to prevent deterioration and not to enhance them. They may not be polished.

**Polished:** Tumble or face polished but not spray polished. The specimens may also be cut or glued together.

**Jewelry:** The stone may be cut, shaped, polished and mounted. The featured stone must have been found and worked in this current year.

**Open:** Specimens may be cut or glued together but not polished or sprayed. Lake Superior Agates may NOT be entered in the Open class.



**Note:** all specimens must have been found in 2006. Polishing or lapidary work must also be done on the specimen during the year it is found and entered. Finally, the specimen must have been found in its natural setting (“in-situ”) by the person entering the specimen.

Also, please label all entries (approximately 2x3 inches) stating the category, material, and general location (county) of your find. On the REVERSE side of the label, print your name. Place the card, name side down, on the table adjacent to your entry. Thank you.

# Stolen Gems *St Croix Rockhounds Leaverite News*

## Know your rocks:

**Leaverite:** also known as dropite, junkite and crudite. This type of rock should be discarded immediately. It constitutes 90% of most rocks kept. Examples: "Sourgrape Agate" and "Mutilated Quartz".

**Sack Rock:** This material which is stuffed into a sack but falls from the top as bearer struggles back to the car. If taken home, is tossed in the corner and forgotten.

**Wonder Rock:** You always wonder why you brought it home.

**Braggin' Rock:** Also known as Pocket or Eatin' Rock. This material is licked, scrubbed, spit upon or fondled until it assumes a near polish, then passed around for admiration.

**@#\* Rock:** A heavy, possibly angular, rock that falls on your toe as soon as you have removed your hiking boots. *from Delaware Mineralogical society 12/06 via Deming Rock Chips 01/07*

**What is the simplest gem** and what is the most complex? The diamond is the simplest gem – the chemical composition being all of carbon and crystallized isometrically. Tourmaline is the most complex. It is said that tourmaline's chemistry is more like a doctor's prescription than the makings of a respectable material. *from the Glacial Drifter 11/05 via Deming Rock Chips 01/07*

**Tumbling Tips** *by Dan Imel from MWF newsletter via Rock Chips 7&8/00 via Stoney Statements 02/06*

**How do you know when to change grit size?** In a vibratory tumbler you start out with medium (220) grit. not course (100), then go to 600 grit then polish. If you ever buy a grit kit. make sure it's for vibratory, no 100 grit. You can add a step and go to 320 or 400 before 600. It saves a little time, not much. The way you know when to change is when you've gotten them as smooth as you want them to be. That means remove pockets, chips. etc. If most of the pieces you are tumbling look good but there are just a few that need more work, go ahead and switch to the next grit. Run the ones that need more work through the next batch to finish them. You want the stones to be pretty good before switching from the 220 grit or they'll take forever in the 600. This is the long step.

**Can you save the grit and use it again for the next batch of rock?** If you are doing it right. there won't be much grit left to save. The grit should break down as you tumble the material. I always had a little grit left on the 220 run that just didn't go away until I paid a little extra for a graded 220 from Ebersole's in Wichita, KS. It's about 50 cent a pound more than ungraded and worth it for me.

Other vibratory tumblers may not have this same problem. You'll find out, I buy 5 pound boxes which do quite a few loads and only pay about \$3/pound. Not worth saving any doesn't break down. If you try to use course (100 grit), it will sink to the bottom and stay there in just about every vibratory I've seen.

**Is it CZ or Diamond?** If the stone is loose, turn it upside down on its table and slide it over a thin black line on a piece of paper. When looking straight down through a CZ, you will see a circle in the center of the stone. A diamond won't do this. *by Don Asbury, Breccia 2/02 via the Rockcollector 3/02 and the Backbender's Gazette 08/05 via the Pick & Shovel 10/05 via Achates11/05*

**Is it citrine or Topaz?** Clean the stone, then using a toothpick, put a drop of water on the table of the stone. The water will form a high bubble on real topaz. On quartz, the water flattens out. *by Don Asbury, Breccia 2/02 via the Rockcollector 3/02 and the Backbender's Gazette 08/05 via the Pick & Shovel 10/05 via Achates11/05*

**Goldstone** should be worked the same as obsidian as it is actually glass. The glass industry considers cerium oxide the best polishing agent. *from the Drift 8/05 via Achates 10/05*